

PENETRATION- AND FIRE-RESISTANT FABRIC STRUCTURES AND MATERIALS

ABSTRACT OF THE DISCLOSURE

A ballistic and/or fire barrier for protecting objects in an interior of a vehicle due to projectile penetration and/or fire includes one or more layers of high strength fabric positioned towards an outer shell of the vehicle. The high strength fabric is substantially fixedly or fixedly positioned with respect to the outer shell of the vehicle. In another embodiment, the ballistic and/or fire barrier protects objects in a structure from damage due to projectile penetration. The ballistic and/or fire barrier includes at least one layer of high strength fabric positioned towards an outer housing of the structure. The high strength fabric is substantially fixedly positioned with respect to the structure towards either the inner or outer surface of the outer housing. In another embodiment of the present invention, a ballistic barrier protects a wearer of the ballistic barrier from damage due to projectile penetration. The ballistic barrier comprises first and second portions positioned generally parallel each other. The first portion includes one or more layers of high strength fabric while the second portion is generally impact-resistant. Preferably, the layer of high strength fabric comprise a plurality of plies. One of the plies can comprise woven fibers. Another of the plies can be a felt. Also preferably, the layer of high strength fabric in the ballistic barrier embodiments comprises a polymer material such as one or more of aramid material, polyethylene material, and polybenzoxazole material.